11: India G-4, 5 (1960-1961) 1962 AWll Kerala AWll

Transport

5.46 The entire coastline of Kerala is well served by the railways. From Trivandrum to Kayankulam and from Tirur to Manjeswar, a total distance of 220 miles, the tracks are only two to three miles from the sea coast. In addition, there is a motorable road running almost all along the entire coastline. Head loads, bicycles, motor lorries, all these modes are employed for the transportation of fish to the markets depending on the distance of the landing sites from the consuming centres.

5.47 The State Fisheries Department operates four insulated vans. In addition, the Department operates two insulated carrier boats, one from Cochin and the other from Azhikode. These boats transport iced-fish through the inland waters to the interior places. For the marketing of fish in the interior areas, the Indo-Norwegian Project operates eight refrigerated vans.

5.48 It is estimated that the State will require about 60 road vehicles and 20 carrier vessels during the next 10 years. The capital expenditure on these is expected to be about Rs. 40 lakhs, of which Rs. 15 lakhs would be required during the Third Plan. The trucks and carrier vessels should, as far as possible, be owned and operated by Fishermen's Cooperative Societies. Expansion of insulated wagon facilities on the railways will be equally necessary. Insulated wagons should be provided on routes connecting the major production centres with the consumption centres.

Marketing

5.49 The marketing of fish in Kerala is not well organized. At present it is controlled by a few moneylenders and fish merchants. The fishermen are very poor and have generally to depend on borrowings during the off season. A departmental survey reveals that in 1958 the fishermen in Kerala had total assets of only about Rs. 30 lakhs against a total debt of Rs. 135 lakhs. Only a small percentage of the fishermen in Kerala own the boats and nets they use. Most of them work as employees under few boat-owner fishermen. In the pay-off period the boat-owner advances small amounts to the fishermen for their day-to-day needs. The catch is auctioned at the landing centres. The bidders include the fish curers, the retailers and lorry owners, who generally supply fish to the retailers.

5.50 Fish prices fluctuate considerably even in the course of the day. Fish is never weighed in the market. They are measured by standards such as heap, basket, and number, and these vary from market to market. The important wholesale fish markets in the State are located at Trivandrum, Kottayam, Tonur, Trichur, Kozhikode, Alwaye, Changanacherry and Athirumpuzha.

5.51 Changanacherry, Athirumpuzha and Vaniyankulam are the most important markets for cured and salted fish. In the coastal areas the consumption of dried fish is confined mostly to the off-season when fishing totally stops. In the interior of the State, owing to lack of transport facilities, cured fish is sold for the major part of the year. The State has a number of retail fish markets, every town or a group of villages having at least one.

5.52 Fish marketing in Kerala requires a great deal of improvement, both

Chapter 8

Transport

IN THE CONTEXT of a developing economy, the transport system has a special role to fulfil. Apart from opening up the country and linking all areas with each other, it has to meet the growing movement of raw materials on account of more rapid development of industry and rising levels of consumption and distribution. The particular relations of production, consumption and distribution obtaining in the State and changing, according to the emphasis of the Plans, entail certain characteristic tasks for the transport system of the State. In Kerala, for example the persistent food deficit of the State, necessitates movements of rice and other cereals by road and rail from adjacent States,[1] and foreign or coastal imports[2] through ports such as Cochin, Calicut or Trivandrum. Fish and fish-products are distributed from the ports by road, rail and waterways in local and inter-State interchange. From her fields and plantations orginate exports of coconuts, copra, pepper, ginger, cardamom, cashew kernels, tapioca, tea, coffee and rubber. The State's forests covering about a fourth of its area, furnish varieties of timber for clearance from one of the biggest timber markets in the world ; countryside distribution and foreign exports take place from Kallayi and Calicut. Exports of mineral ores, such as ilmenite, have to be handled from ports like Quilon or Chavra. The transport media serve continually, except for the interruption of the monsoon, in the carriage of raw materials, fuels, and essential construction and other goods such as cement, iron and steel, sugar and textiles. In particular, the transport network has to cater daily to the needs of industrial establishments, e.g., rubber and titanium factories at Trivandrum ; cashew industry at Quilon, the aluminium and ceramic industries at Kundara, paper and plywood factories at Trichur ; the coir and coir products of Alleppey ; the cement and sugar factories at Kottayam, the rayon factory at Perumbavoor ; the industrial complex at Alwaye comprising fertilizer, chemical, textile, glass and aluminium industries ; the saw mills and timber-based industries, soap, etc., in the Calicut area ; the big plywood factory at Baliapatam; the tile industry at Quilon, Trichur, Feroke, Calicut and other centres.

8.2 As regards passenger traffic, the Southern Railway carried 16.2 million passengers in 1959, the pressure of traffic being notable at Calicut, Quilon, Ernakulam, Alwaye and Trivandrum Central. The nationalized road transport services carried 65.3 million passengers in 1959. The passenger motor-boat services operating on the inland waterways carry 27,700 passengers daily. About 1,100 passengers

[1] Over 600,000 tons.
[2] About 80,000 tons in a recent year.

11: India G-4, 5 (1960-1961) 1962 AWII Kerala AWII

embark and disembark every month at the two airports of the State in Trivandrum and Cochin.

8.3 The State's transport system has to meet not only the requirements of the internal movement of traffic and the needs of inter-State and overseas trade and commerce of the State, but also the traffic connected with the import and export trade of adjoining areas in the neighbouring States. Calicut and Cochin provide suitable inlets and outlets for the intake of oil fuels, cotton, hardware and machinery, fertilizers and foodgrains, and for exports of tea, coffee, etc.

The Transport System

8.4 The transport system of the State consists of:

A. Sections of the Southern Railway, 543 miles long; (broad gauge 331 miles; metre gauge 204 miles; mixed gauge 8 miles), serving port-towns such as Cochin, Quilon and Calicut, and other important industrial centres.

B. A road network made up of national and provincial highways (1,432 miles) and district and village roads (9,307 miles).

C. A unique inland waterway system of navigable rivers and coastal and cross canals, 1,178 miles long.

D. Thirteen ports, including a major port at Cochin, and two active minor ports at Calicut and Alleppey.

E. One hundred and eleven statute miles of airways, with airports at Trivandrum and Cochin.

8.5 Nearly 145,000 persons,[1] constituting 2.93 per cent of the working force of the State are engaged in transportation and account for an annual income of Rs. 8.697 crores.

8.6 The features of this system, particularly in relation to the physical and financial (investment) demands that the growth of the State's economy may make on it in the coming decade (1961–71) are highlighted here for each medium of transport.

THE RAILWAYS

8.7 In relation to the extent of area served (14,992 sq. miles), the railway mileage per 100 square miles of State territory (3.6 miles) compares favourably with all-India (2.7 miles) and Mysore (2.2 miles); Madras State is better served with 4.4 miles per 100 square miles. The railway mileage per 100,000 of population in the State is however, only 3.4 miles, slightly less than a third of what it is for all-India, viz., 9.5 miles. The corresponding figures for the adjoining States of Mysore and Madras are higher being 6.2 and 5.6 miles respectively. The comparatively lower average

[Text continues on p. 127]

[1] 1961 Census figures.

11: India G-4, 5 (1960-1961) 1962 AWII Kerala AWII

transport activities of the State. About 240,000 tons of imports and 310,000 tons of exports of the State are handled, mostly in stream, and carried to and from the port by the inland waterway system. The role of the port and of the inland waterway system as a feeder in the transport activity of the State is likely to grow along the lines outlined in a later section.

8.33 Studies made by the Intermediate Ports Committee show that Neendakara which is six miles north of Cochin, can, if developed, serve the industries in the Quilon-Kundara area to the extent of an annual traffic of 400,000 tons comprising cashewnuts, ilmenite, etc. Koilthottam, at present handling the ore traffic, may stabilize its present traffic. Industrial developments around Calicut, such as the rayon pulp industry expected to come up at Mavur, may push the traffic at that port to over half a million tons by 1971.[1]

8.34 Several improvements were made at the Port of Cochin. With continuing increase in the import of oil, two tanker berths had to be constructed at a cost of Rs. 17.4 lakhs at Ernakulam channel to ensure safety and quicker turn-round. The pipe-line leading to the shore installations was commissioned in 1956. Three of the four additional wharf berths provided with crane, railway track, transit sheds, warehouses, open stacking space and other facilities at an estimated cost of Rs. 2.96 crores are almost ready.

8.35 Total expenditure on the development of minor ports of the State was expected to be Rs. 22.6 lakhs in the Second Plan.

8.36 Pending more detailed information regarding actual investment expenditure between 1956-57 and 1960-61, it may be estimated that the investment in the State in the Second Plan on transport–railways, roads, bridges, buses, inland waterways and ports, was about Rs. 11.14 crores. It appears that in the first four years of the Plan the actual expenditure was about Rs. 7.18 crores, i.e., about 64.5 per cent of the financial allocations had been spent. In the Third Plan period and in the Fourth, every effort must be made to fulfil as nearly as possible the physical and financial targets, as transport arrangements must be ready in advance to receive the anticipated volume of traffic without creating bottlenecks.

AIR TRAFFIC

8.37 The airports at Trivandrum and Cochin are served daily by a clockwise and an anti-clockwise service touching (*a*) Madras, Trichy, Madurai, Trivandrum, Cochin and (*b*) Coimbatore, Bangalore, Madras and Cochin. Cochin is also served by a daily service from Bombay *via* Belgaum. About 400 passengers travel every month by each of these services. About 350 passengers travel from Cochin to Belgaum and Bombay every month and 70 between Bombay and Trivandrum *via* Cochin or Bangalore. The prospects of this traffic are being studied at present by the National Council

[1] For particulars of a detailed assessment of traffic prospects at Calicut, Beypore vide *Report of Traffic Survey of Beypore*, NCAER, 1962.

II: India G-4, 5 (1960-1961) 1962 AWII Kerala AWII

for Indian Airlines Corporation.[1]

8.38 The absence of an air-link between Calicut and Trivandrum is being keenly felt, as other forms of travel including railways to and from Kerala's capital involve a long and time-consuming journey with the difficulties attendant on the break-of-gauge at Ernakulam.

ECONOMIC DEVELOPMENT AND TRANSPORTATION DEMANDS IN KERALA DURING 1961-71

8.39 An assessment of traffic that the implementation of the programmes proposed elsewhere in this survey will generally indicate that an additional overall traffic of 5 million tons can be anticipated during 1970-71. The nature, magnitude and composition of the anticipated traffic are set out in Table 41.

8.40 The estimate does not take into account traffic in certain items, for example, coconuts and certain types of consumer goods. An allowance of 10 per cent may be made for these omissions. Further, the transport system of the State, besides meeting the additional demands of its own traffic, will have to bear the burden of traffic of other States, such as Madras or Mysore, which is handled for them at Kerala's ports[2] and on roads and railway sections[3] within the territory of the State; the additional traffic on this account may amount to 1 or 1.5 million tons by 1970-71. The overall growth in traffic may thus be between 60 and 65 per cent over the present level.[4] The transport arrangements in the State have thus to be planned and developed to meet an additional traffic of 6.5 to 7 million tons by 1971.

8.41 There may be some changes in the character of the traffic. For instance, there may be a decline in the traffic in firewood by about 100,000 tons as oil and other fuels are coming in as substitutes. Changes in technology in the Fourth Plan period presage the disappearance of the traffic in gypsum (145,000 tons) to Alwaye and substitution by imports of sulphur (100,000 tons) *via* Cochin. Decline in foreign imports of foodgrains is anticipated, while increased imports from more distant sources inside the country are envisaged.

8.42 The distribution of the State's additional traffic between different media (including the demand for ports' services) as anticipated, is presented in the table below. The heavy dependence of Kerala on the import of materials for industry from outside is reflected in the preponderant inter-State rail traffic. By 1971 the increase in the rail traffic in the State over its traffic in 1958-59 may be about 60 per cent.[5]

[1] An Air Traffic Survey has since been completed by NCAER for the Indian Airlines Corporation. Besides estimating the traffic potential of the circular route in the Southern Region, the Survey has recommended air linking of Calicut, inclusion of Trivandurm in the Madras—Tiruchirapalli, Madurai—Colombo air route, location at Thirukakara of an airport for Cochin and Alwaye, terminal facilities at the Cochin Airport, etc.
—Vide *Air Traffic Survey—Southern Region*, NCAER, 1962

[2] Predominantly at Cochin.

[3] Mostly on the highway and railway section between Ernakulam and Shoranur.

[4] The current traffic by road, rail and waterways is estimated at 10.8 million tons.

[5] The cross traffic to or from Cochin and from or to other States is taken into account.

[Table 41, appearing on p. 296 of the text, has not been processed--Analyst]

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*433 489

ADDITIONAL TRAFFIC ANTICIPATED BY DIFFERENT TRANSPORT MEDIA IN 1970-71

(In thousand tons)

Railways	2,337
Road transport[a]	1,859
Waterways[a]	1,126
Ports[b]	1,367

[a] Includes feeder traffic.
[b] Coastal and foreign traffic included.

8.43 The intra-State road traffic may be expected to register significant gains whereas the inter-State is likely to be steady: the decline in inter-State foodgrain movements by road may be somewhat counter-balanced by anticipated industrial traffic. The waterways are likely to compete for traffic going by road especially in low-rated commodities (sand, limeshell, ores), as well as in those which are conveniently handled at the ports either alongside berths or in midstream (e.g. petroleum, foodgrains imports, etc.).

[504] 8.44 The State's demand for port services in coastal and foreign trade is expected to go up by about 1.37 million tons by 1970-71. The services are likely to be required particularly at Cochin, Calicut and Neendakara-Quilon. At Cochin and Calicut the demand for port services will be further reinforced by the growing needs of the hinterland in Coimbatore and Nilgiri districts of Madras. The railway link with Cochin may require further additions to line capacity on the route to Alwaye, Shoranur and Coimbatore.[1]

8.45 The distribution of additional traffic among the ports of Kerala, as anticipated for 1970-71, is set out in table under para 8.42. The figures given in the table are approximate estimates based on requirements of port services of various industries suggested by the National Council. Only detailed traffic surveys can establish close and reliable estimates, allowing for such factors as traffic-potential in the hinterland, beyond the State boundaries, if any, and traffic gains or losses resulting from diversion from or to other ports. In the case of Cochin, imports are likely to be very predominant, foodgrains, petroleum products, and chemicals figuring prominently. Such gains as are likely to be achieved in exports may be in chemicals, plantation products, etc. As regards Calicut, the requirements of the newly coming up rayon-pulp factory is likely to be an important factor responsible for the import of machinery, fuel oil, coal and coke, and the coastal export of rayon pulp. Neendakara-Quilon ports are likely to receive impetus from developments in Kundara, Quilon, etc.

8.46 The effect of regional industrial developments within the State on the traffic by inland waterways is indicated in Table 42. Intensification of traffic between Alwaye and Cochin, Cochin and Quilon, Tiruvalla, Kottayam and Alleppey may be expected. The growth of traffic upto the potential indicated will depend

[1] The extent to which imbalances of traffic on these and other lines of the State are likely to be affected by anticipated growth of traffic to and from the State between 1961 and 1971 is to be separately surveyed and assessed.

2 [Table 42, appearing on p. 296 of the text, has not been processed - Analyst]

11: India G-4, 5 (1960-1961) 1962 AWll Kerala AWll

upon the maintenance of navigability in the waterways, and removal of a number of handicaps listed in para 8.28.

CONCLUSIONS

8.47 The conclusions that follow from the general traffic pattern outlined above are (*a*) accessions to traffic may be expected just in those areas and routes where it is strikingly high already (e.g., Cochin-Shoranur), (*b*) spare transport capacity on many railway sections will be absorbed, (*c*) the road, rail and waterway links to the ports may need improvement, and (*d*) further, the road transport capacity and terminal facilities should be increased to meet mounting demands.[1]

8.48 The railways have an important role to play, mainly in inter-State traffic and in helping the work of the ports. In the Third Plan, an investment of Rs. 1.2 crores i.e., of the same order as proposed and accepted but unfulfilled in the Second Plan may be necessary, mainly in connection with increase in the line capacity on vital routes (e.g., Cochin-Shoranur). If traffic and engineering surveys establish the economic feasibility of Trivandrum-Nagercoil-Tirunelveli line, it may be considered for the Fourth Plan.

8.49 As the eastern regions of the State are untouched by the Railways and are likely to remain so, these have to rely mainly on road transport. It is necessary to extend, bridge, and improve the road network in these areas till at least 50 per cent of the targets set for 1981 are achieved by 1971[2]. The expenditure will be about Rs. 17 crores in the Third Plan and Rs. 26.3 crores in the Fourth Plan.

8.50 The Third Plan programme for roads and bridges in the State will cover the development of arterial routes and cross-roads in the north of the State (Rs. 4.32 crores), improvement of arterial routes in the south including the opening of Thenmala-Thekkadi road (Rs. 1 crore), the Vypeen Island Scheme (Rs. 1 crore), construction and improvement of about 3,600 miles of district and village roads (Rs. 5.996 crores) and the construction and improvement of 122 major and 584 minor bridges and culverts. Schemes spilling over from the Second Plan and costing Rs. 1.62 crores will also have to be completed. It is desirable to institute a road fund in the State to finance road development. The particular areas and routes where extension and improvements are possible in the next five years are set out in Table 43. The physical targets are indicated in Table 44.[3]

8.51 The number of trucks will need to be considerably augmented to cope up with the anticipated demands of traffic. The investment on trucks may amount to about Rs. 11 crores in the Third Plan and Rs. 10.29 crores in the Fourth Plan. The number of passenger buses may require to be increased by 2,400 in 10 years. About 4,600 buses may have to be replaced by the end of 1971. This would entail an expenditure of Rs. 20.5 crores. The State's Third Plan envisages the continuance of the

[1] Passenger traffic is certain to go up with rising population and concentrations of industry and trade at such centres as Trivandrum, Quilon, Kundara, Cochin, Ernakulam, Trichur, Palghat, Calicut and Cannanore but no estimate of the passenger service demands has been made here.

[2] Targets for 1981 as per formula of the Chief Engineers' Plan, Bombay (1960).

[3] [Table 44, appearing on p. 298 of the text, has not been processed -- Analyst]

12;Peter E-5 (1939, 1949) 1963 AW11 Kerala AW11

but then this influence made itself felt rather by conversions and personal dealings than by any direct, government action, as now.

Transport, which in Kerala had always been difficult, was also greatly changed. Modern facilities, such as good roads, ferries, bridges; later, motor cars, railways, engine-driven ships, boats and launches; and finally, aeroplanes, have put thousands of boatmen and cartmen out of work and have not only brought formerly isolated and inaccessible parts of the country into contact with the rest, but have also made important centres become within easy and rapid reach of each other. As in other parts of the world where it is impossible for race distinctions to be observed in a system of general transport, caste is overlooked in public transport in Kerala, and this fact has greatly contributed to breaking down traditional socio-religious pre-occupations in such matters.

With the institution of a regular method of dispensing justice through courts, caste was dealt a further blow; the European masters of India refused to treat individuals otherwise than as equals before the law. The judiciary personnel was recruited from all sections of the population, regardless of caste or creed. This measure, together with the new way in which government servants were enlisted, gave the more enlightened castes of Nayars and Tiyas their chance. The present eminence in public affairs which these two communities have attained is in a large measure due to the opportunities thus thrown open to them.

Education, of course, also had a lot to do with it. Instead of the old kind in which village teachers taught native lore and traditions in an unchanging, ageless fashion, European-type schools were opened and modern means of education became available to all who wished to take advantage of them. These methods may be criticised today, since independance in 1947, as being un-Indian and useless in the context of the national culture, but the fact remains that they brought great changes in the outlook of the people, especially among the middle classes, who have indisputably benefitted from them.

Liberal, learned professions began to be followed by many to whom such careers were not open before, and again, regardless of caste distinctions, lawyers, doctors and teachers appeared in large numbers in Kerala. Many of them soon travelled to other parts of India, where their reputation as able and knowledgeable practitioners has never ceased to grow. A large part of the Government of India's New Delhi office personnel is made up of men from Kerala, in both high and subordinate positions, especially Nayars, so much so, indeed, that the fact has become the subject of a standing joke.

31: Slater S-5 (1916-1917) 1918 AWI India
Kerala AWII

VATANAMKURUSSI VILLAGE (WALLUVANAD TALUK).

[*By N. Sundara Aiyar, Presidency College, Madras.*]

361 489 *Preliminary.*—The village lies in the interior of the district, thirty miles west of the municipal town of Palghat on the high road that passes from Palghat to Ponnani. It is to the north of the railway line passing from Calicut to Palghat, and about equidistant from the two railway stations of Shoranur and Pattambi on that line (South Indian Railway). It is fifty-four miles south-east (by railway) of the port of Calicut, the capital of the district.

361 131 The village is more or less surrounded by low hills on all sides, and there is a small forest to the east of it. A portion of the village has for its southern boundary the Bharata Puzha (called the Ponnani river, because it joins the sea at Ponnani). The river is of little use for navigation, since it is in flood during the rains and almost dry in summer. The railway passes through the village, for about a mile, though the nearest railway station is 4¼ miles distant. The trunk road from Palghat also passes through the middle of the village. The village is roughly in the shape of a triangle with its apex to the north and the base on the south. Being in the midst of hilly country, dry soil abounds in the village, though the few wet acres are comparatively good.

162 *Population.*—The total population of the village in Census years was as follows:—

Year.	Occupied houses.	Males.	Females.	Total.	Hindus.	Muhammadans.
1891 ...	322	1,055	1,134	2,189	2,116	73
1901 ...	369	1,130	1,187	2,317	2,226	91
1911 ...	398	1,210	1,270	2,480	2,373	107

The figures include those of an adjacent small village, of which the total population in 1911 was 124, all Hindus.

564 There are Brahmans and Sudras, the latter split up into a large number of sub-castes and sects like the Nayars, Nambiyars, Menons, Chettis, etc., and the lower classes like the Thiyyas, or Ezhuvans, and the depressed classes of Cherumas, Pariahs and Nayadis. Nayars predominate in the village. There are a few Muhammadans, but no Christians at all.

Of Brahmans there are ten families comprising 60 individuals resident in the village. There are two families of Nambudiri Brahmans with some 30 members.

162 The great majority are Nayars, of whom there are about 150 families with nearly 1,500 individuals. Cherumas may number between 300 and 400, the Thiyyas or Ezhuvans about 500. The chief minor sub-castes in the village are Chettis (34), Kunparars (Potters, about 50), Asaris (Carpenters, 28), Karuvans (blacksmiths, 21), Thattars (goldsmiths, 19), Panans (makers of bamboo and palm leaf umbrellas, 29), Masons (13), Pariahs (42), and five families of Mannans, washermen of the lower classes, who also make mud walls, engage themselves as herdsmen and act as Pujaris, i.e.,